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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Trevino et al.
Serial No. : 09/683,130
Filed : 11/21/2001
For : Method and Apparatus for Prescribing an Imaging Scan
and Determining User Input Validity
Group Art No. : 2621
Examiner : Kim, Chong R.

CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10

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REQUEST FOR REHEARING PURSUANT TO 37 C.F.R. § 41.52

Dear Sir:

Responsive to the Decision on Appeal issued by the Board of Patent Appeals and Interferences for the above identified Application, please consider the following Remarks, pursuant to 37 C.F.R. 41.52.

REMARKS

Claims 1-31 are pending in the present application. In the Decision on Appeal of January 10, 2008, the Board affirmed the rejection of claims 9-18 under 35 U.S.C. § 102(e) and affirmed the Examiner's rejection of claims 1-8 and 19-31 under 35 U.S.C. § 103(a).

Appellant respectfully requests reconsideration by the Board of the rejection of claims 9-18 under 35 U.S.C. § 102(e) for the reasons set forth below.

1.) The Board Erred in Merging “Hierarchical” and “Prioritizing” in Claim 9.

First, in regard to claim 9, Appellant argued that the Wu et al. reference (US 6,687,527) relied upon by the Examiner fails to teach the claimed limitation of “hierarchically prioritizing the plurality of scan parameters for the scan session.” *Appeal Brief*, December 7, 2005, p. 4-5. In their Decision, the Board stated that “we agree with Appellants that the aforementioned section of the reference does not disclose hierarchical prioritizing of the plurality of scan parameters.” *Decision*, January 10, 2008, p. 8. However, the Board set forth a new ground of rejection in view of Wu et al., wherein the Board stated that “Wu teaches that the operator hierarchically prioritizes the scan parameters in: parameters which are fixed such as the FOV, modifiable parameters such as those displayed in Figure 2A which include resolution 104, and monitor parameters such as those shown in Figure 2B including imaging time 206 (Finding of Fact 2).” *Id.* at 8. Appellant believes that the Board has misapprehended the teachings of Wu et al. in entering the new ground of rejection for claim 9, and Appellant maintains that claim 9 patentably defines over the prior art.

In particular, Appellant believes that Wu et al. fails to teach hierarchical prioritization of the scan parameters for a scan session. While Wu et al. may teach user-selectable scan parameters similar to those disclosed by the Appellant, nowhere in Wu et al. is it taught or suggested to prioritize these scan parameters for a particular scan session. In fact, the flow chart shown in Figs. 3 and 4 of Wu et al. teaches away from

such hierarchical prioritization. Specifically, Fig. 3 shows that the user selects a pre-defined scan sequence (Step 504), wherein selected sequence parameters and monitor parameters are automatically calculated and set (Steps 506-510). The user can then choose to run the scan selected, run an “optimization algorithm”, or enter new parameter values (Step 520). Only when the user chooses to run an “optimization algorithm” is the user given the option to set fixed parameters (Step 606 in Fig. 4). After the optimization algorithm is run, the process loops around to return to Step 508, wherein the user can then choose to run another optimization algorithm, enter new parameter values, or run the scan selected. *Wu et al.*, Figs. 3-4. Such a “looping” process is exactly the opposite of Appellant’s “hierarchical prioritization” of scan parameters, as Wu et al. enables the user to change so-called secondary and tertiary parameters before or after fixed parameters are chosen, thereby enabling the secondary and/or tertiary parameters to affect the fixed parameters. Further, the written disclosure of Wu et al. does not correct the deficiencies shown in Figs. 3-4, as the specification of Wu et al. merely shows that a user can modify a selected sub-set of scan parameters (such as repeat time TR, pixel resolution, etc.), which, in turn, may modify a set of monitor parameters (such as spatial resolution, imaging time, etc.). *Id.* at Col. 9, Line 7 – Col. 10, Line 47. Then, if a user elects to run an “optimization routine”, fixed parameters (such as FOV, number of slices, etc.) can be chosen by the user, wherein the scan parameters are then updated and the user-selectable routine is repeated. *Id.* at Figs. 2a, 2b, 3, and 4, Col. 19, Line 6 – Col. 20, Line 10. Again, while Wu et al. may teach similar selectable parameters as those disclosed by Appellant, Wu et al. does not teach the claimed limitation of “hierarchically prioritizing the plurality of scan parameters for the scan session.”

In contrast, Appellant’s specification clearly defines hierarchical prioritization of scan parameters, as set forth in Paragraph [0166]:

“The present invention further provides prescription guidance by prioritizing all the scan parameters into three categories on a per scan session or experiment basis. The scan parameters are prioritized into a primary, secondary, and tertiary group. This ranking defines the relationship between parameters and provides guidance how their values may be affected based on

user input. For example, change in the value of a primary parameter, such as FOV, may affect other primary parameters as well as secondary parameters, such as, resolution, and tertiary parameters, such as, timing. However, changing a secondary parameter value may affect other secondary parameters as well as tertiary parameters, but would not affect a primary parameter. Moreover, changing a tertiary parameter may only affect other tertiary parameters.”

Specification, Para. [0166] (emphasis added).

Thus, the specification sets forth that there are certain conditions in which a parameter may or may not be changed, the conditions being based upon the hierarchical priority of the scan parameter that is chosen by the user. *Id.* at Para. [0166]. It appears that the Board has failed to give patentable weight to the words “hierarchically” and “prioritizing” alone, but instead reads the limitation as simply being user-selectable scan parameters. Nowhere does the Board even address how the scan parameters that may be chosen by the user are prioritized in a hierarchical manner. The Board merely states that “[t]his hierarchy of the scan parameters is the same as the one disclosed in the current disclosure which includes the respective: primary parameters, including FOV, secondary parameters including resolution and tertiary parameters including timing.” Decision, January 10, 2008, p. 8. While the selectable parameters of Wu et al. may be similar to those of Appellant, it is clear that Wu et al. discloses no “hierarchical prioritizing” of the plurality of scan parameters. As Wu et al. fails to disclose any such prioritization, either expressly or inherently, Wu et al. cannot teach each and every element set forth in the claim, as is required under 35 U.S.C. § 102(e). For this reason, Appellant respectfully requests that the Board reverse the rejection of claim 9.

2.) The Board Erred in Not Considering Claim 12 in its Entirety.

Considering claim 12, the Board affirmed the rejection of the Examiner, stating:

“At the outset we note that claim 12 states nothing about how the change of tertiary parameters is achieved, thus the tertiary parameters such as monitor parameters in Wu may be changed directly even though not

preferably or indirectly via the change of secondary parameters or the selectable parameters (Finding of Fact 3). Wu discloses that tradeoffs are made between the monitor parameters such as SNR 202 and the imaging time 206 (Finding of Fact 4). Therefore, Wu teaches that a change to SNR 202, which is a tertiary scan parameter, has the ability to affect imaging time 206 which is another tertiary parameter.” *Decision*, January 10, 2008, p. 9.

Without commenting on the accuracy of the Board’s interpretation of the Wu et al. reference above, Appellant notes that both the Examiner and the Board have failed to show that Wu et al. teaches each and every element of claim 12, either expressly or inherently, as is required under 35 U.S.C. § 102(e). The Board did not address claim 12 in its entirety, wherein the claim reads “[t]he method of claim 10 wherein a change to one of the set of tertiary scan parameters may affect another of the set of tertiary scan parameters, but not affect any of the set of secondary scan parameters and any of the set of primary scan parameters.” *See claim 12* (emphasis added). The Board merely states that “we find the Appellant’s argument not persuasive as Wu does teach that a change to one tertiary parameter may or has the ability to affect another tertiary parameter.” *Decision*, January 10, 2008, p. 9-10. The Board never addresses the entire claim, particularly the limitation which sets forth that a change to tertiary scan parameters will “...not affect any of the set of secondary scan parameters and any of the set of primary scan parameters.”

Appellant set forth in its Appeal Brief its position that the Wu et al. reference does not teach each element of claim 12. *Appeal Brief*, December 7, 2005, p. 6-7. That is, Wu et al. fails to teach, either explicitly or inherently, the limitation of “wherein a change to one of the set of tertiary scan parameters may affect another of the set of tertiary scan parameters, but not affect any of the set of secondary scan parameters and any of the set of primary scan parameters.” *See claim 12* (emphasis added). Neither the Examiner nor the Board has addressed this failure. In fact, the Examiner’s entire position was based upon interpreting the word “may” in the alternative, i.e. meaning “may” or “may not”. *Examiner’s Answer*, March 22, 2006, p. 15-16. The Examiner never addressed the

additional limitations of the claim beyond the limitation regarding tertiary scan parameters because the Examiner believed every claim limitation after “may” or “may not” could be ignored (i.e. may not), even though Appellant argued that Wu et al. fails to teach all of the limitations of claim 12. Appeal Brief, December 7, 2005, p. 6-7.

In their Decision, it appears that the Board adopted Appellant’s definition of the word “may” as being defined as “to be allowed or permitted to”, which is contrary to the Examiner’s interpretation. Decision. January 10, 2008, p. 8-9. However, the Board never analyzed the rest of claim 12 beyond the limitation of “wherein a change to one of the set of tertiary scan parameters may affect another of the set of tertiary scan parameters.” As the Board pointed out in their Decision, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. Inc., v. Union Oil Co. of California*, 814 F.2d at 631. Id. at p. 9. As it is a requirement that the Examiner must consider each and every element set forth in a claim, Appellant believes that the Board should also consider each and every element of a claim in determining the applicability of the prior art.

In the Appeal Brief, Appellant set forth that the Wu et al. reference does not show the claimed limitation of “wherein a change to one of the set of tertiary scan parameters may affect another of the set of tertiary scan parameters, but not affect any of the set of secondary scan parameters and any of the set of primary scan parameters.” Appeal Brief, December 7, 2005, p. 6-7. As was shown above with regard to claim 9, Wu et al. merely discloses that the user can modify certain scan parameters similar to those disclosed by Appellant. Wu et al., Figs. 2a, 2b, 3, and 4, Col. 9, Line 7 – Col. 10, Line 47, and Col. 19, Line 6 – Col. 20, Line 10. Nowhere does Wu et al. detail how the primary (or fixed) and the secondary (or modifiable) scan parameters may not be affected by the tertiary (or monitor) parameters, as is set forth in claim 12. In fact, the configuration of the flow chart process in Figs. 3-4 of Wu et al. shows that the tertiary (or monitor) parameters may be changed (at step 524) by the user before or after selection of primary (or fixed) parameters (at step 530). Id. at Figs. 3-4. Thus, Wu et al. shows that primary parameters and secondary are able to be changed by tertiary parameters, which is opposite of that

which is claimed in claim 12. Therefore, in light of the foregoing, Appellant believes that Wu et al. does not teach each and every element of claim 12, and thus Appellant requests that the Board reverse the rejection of claim 12.

3.) At a Minimum, Prosecution Must be Reopened Because When the Board Agreed with Appellant on its Argument Regarding Claim 9, it Erred in Stating that Appellant Had Not Shown that the Examiner Erred.

The Board stated that “Appellants have not shown that the Examiner erred in rejecting claims 9-18 under 35 U.S.C. § 102(e).” *Decision*, January 10, 2008, p. 12. However, the Board clearly decided that the Examiner did indeed err in rejecting claims 9-18, stating that “[t]hus, we agree with Appellants that the aforementioned section of the reference does not disclose any hierarchical prioritizing of the plurality of scan parameters.” *Id.* at p. 8. The Board then went on to assert a new ground of rejection, albeit with the same reference (Wu et al.), to allegedly teach the hierarchical prioritizing of the plurality of scan parameters. *Id.* at p. 8.

Appellant has not had the opportunity to respond to the new ground of rejection set forth by the Board, and therefore Appellant believes that the opinion of the Board should not simply be “Affirmed”, but at best, be “Affirmed-in-Part” with the suggestion that the examiner apply the new rejection and allow the Appellant an opportunity to respond. Clearly, the Board did not affirm the rejection of claims 9-18 under 35 U.S.C. § 102(e) that was presented by the Examiner. As such, the Board cannot say that Appellants “have not shown that the Examiner erred in rejecting claims 9-18.” *Id.* at p. 12. At a minimum, Appellants respectfully request that the opinion be changed from “Affirmed” to “Affirmed-in-Part”.

Conclusion

For the reasons stated above, and previously presented in prior responses, Appellant respectfully requests that the Board reverse the rejection of claims 9-18 under 35 U.S.C. § 102(e).

Respectfully submitted,

/Timothy J. Ziolkowski/

Timothy J. Ziolkowski

Registration No. 38,368

Direct Dial 262-268-8181

tjz@zpspatents.com

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Attorney Docket No.: GEM8081.023

P.O. ADDRESS:

Ziolkowski Patent Solutions Group, LLC

136 S. Wisconsin St.

Port Washington, WI 53074

262-268-8100